

REMARKS

Claims 35, 46 and 58 have been canceled without prejudice. Claims 23, 27, 30, 34, 38, 41, 45, 48, 50, 53, 57, 59, 61 and 64 have been amended. Claims 23-34, 36-45, 47-57 and 59-67 are currently pending. Reexamination and allowance of the pending claims is respectfully requested.

I. Drawings

First, Applicant is submitting herewith a replacement sheet of drawings for FIG. 15A which includes the numerals 48m, 50m.

Second, although the reference numeral 52m is not expressly mentioned in the specification, Applicant submits that sufficient disclosure is provided on page 14, lines 17-20 of the specification, which states that the element 52m is the same as element 52i, which is in turn the same as element 52 (see page 13, lines 11-15).

Thus, it is respectfully requested that all drawing objections be withdrawn.

II. Specification

The Examiner has objected to the specification because the following phrases are not set forth in identical manner in the specification: "cells having exactly twelve bends and being non-symmetrical about the longitudinal axis", "twelve bends comprise a spring element", and a "central bottom bend". Applicant respectfully submits that the specification and drawings (which are considered to be part of the specification) provide sufficient antecedent basis for these phrases.

First, FIG. 15A clearly illustrates a "central bottom bend" 54m in each cell 22m. See also page 14, lines 28-31.

Second, FIG. 15A also clearly shows that each cell 22m has exactly twelve bends, and that the cell 22m is non-symmetrical about the longitudinal axis.

Third, FIG. 3A and page 8, lines 9-20 describe each compensating portion 60 as having a springy nature (i.e., a spring element). Page 7, lines 6-15 state that each compensating portion 60 comprises at least one bend 62, 64. The specification describes the stent 20m as being based on the same principles illustrated in FIG. 3A. Thus, the specification clearly provides that "some of the twelve bends comprise a spring element".

In light of the above, it is respectfully submitted that the specification and drawings provide antecedent basis for all claimed subject matter.

III. Substantive Rejections

Claims 23-26, 29, 31-37, 40, 42-49, 52, 54-60, 63 and 65-67 stand rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,132,460 to Thompson ("Thompson").

Claims 23-26, 28, 29, 31-37, 39, 40, 42-49, 51, 52, 54-60, 62, 63 and 65-67 stand rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/34668 to Roubin et al. ("Roubin"). Claims 23, 24, 26, 27, 29-32, 34, 35, 37, 38, 40-43, 45-50, 52-55, 57-59, 61 and 63-66 stand rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,206,911 to Milo ("Milo"). These rejections are respectfully traversed.

First, the Examiner's courtesy in extending the undersigned a personal interview on August 18, 2003 is greatly appreciated. The subject matter that was discussed during this interview is set forth throughout this Remarks section.

Claims 27, 30, 38, 41, 50, 53, 61 and 64

First, claims 27, 30, 38, 41, 50, 53, 61 and 64 were only rejected based on Milo, and page 6 of the Office Action had even suggested that these claims "do not recite only or exactly three bends with acute angles". As a result, Applicant has rewritten these claims into independent form, and reciting that "exactly three" of the bends define acute angles. Thus, it is respectfully submitted that claims 27, 30, 38, 41, 50, 53, 61 and 64 are now in condition for allowance.

Independent Claims 23, 34, 45 and 57

Independent claims 23, 34, 45 and 57 have been amended to recite that each cell in the second longitudinal row of cells has a different orientation from each cell in the first longitudinal row of cells. This is best seen by comparing rows 22m and 22y in FIG. 15A. The cells 22y have a different orientation from the cells 22m.

During the interview, the undersigned explained that this feature allows the struts in a given cell to be effectively nested. See also page 7, line 24 to page 8, line 2 of the specification. In particular, when viewing the cell 22m in FIG. 15A, the two lower struts can nest into the two upper struts. Effective nesting provides important benefits, such as allowing the stent to be compressed into a smaller profile (also known as an improved compression to expansion ratio) to facilitate delivery into narrower vessels. Another benefit with improved nesting is that such nesting allows the stent to experience increased strength at its struts, and therefore experience greater resistance to compression after the stent has been deployed in use.

The improved nesting resulting from non-symmetrical adjacent rows of cells allows the stent to have a smaller cell size, which increases the strength of the stent while retaining the springy nature of the stent and its ability to compensate for the foreshortening effect.

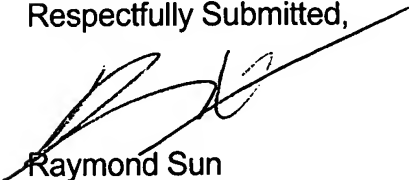
In contrast to the above, none of the cited references (Thompson, Roubin and Milo)

teach or suggest providing each cell in the second longitudinal row of cells with a different orientation from each cell in the first longitudinal row of cells. In Thompson, Roubin and Milo, all the cells do not nest, so the cells in adjacent rows have the same orientation.

Thus, claims 23, 34, 45 and 57 (and the claims depending therefrom) are submitted to be in condition for allowance.

In light of the above, all pending claims are submitted to be in condition for allowance. The Examiner is encouraged to telephone the undersigned if there are informalities that can be resolved in a phone conversation, or if the Examiner has any ideas or suggestions for further advancing the prosecution of this case.

Respectfully Submitted,



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Dated: September 5, 2003

CERTIFICATE OF MAILING

I hereby certify that this paper and its enclosures are being deposited with the United States Postal service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Date: September 5, 2003

By: 
Raymond Sun